

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Previously presented) An isolated polypeptide that suppresses neuronal death associated with Alzheimer's disease having an amino acid sequence of Formula (I):

Pro-X_{n1}-(Cys/bXaa)-(Leu/Arg)-X_{n2}-Leu-Thr-(Gly/Ser)-X_{n3}-Pro (I) (SEQ ID NO: 63)

wherein "Cys/bXaa" indicates Cys or a basic amino acid; "(Leu/Arg)" indicates Leu or Arg; "(Gly/Ser)" indicates Gly or Ser; and X_{n1}, X_{n2}, and X_{n3} independently indicate arbitrary amino acid sequences not more than 10 residues in length, respectively.

2. (Currently Amended) An isolated polypeptide selected from the group consisting of:

(a) a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60; and

(b) a polypeptide that suppresses neuronal death associated with Alzheimer's disease having an amino acid sequence ~~selected from the group consisting of~~ which differs from a polypeptide of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein in such a way that one amino acid has been substituted, deleted, inserted, ~~[[and/]]~~ or added.

3. (Canceled)

4. (Previously presented) A fusion polypeptide comprising the polypeptide of any of claims 1 to 2 fused with one or more other polypeptides.

5. (Currently Amended) An isolated DNA encoding a polypeptide selected from the group consisting of:

(a) a polypeptide that suppresses neuronal death associated with Alzheimer's disease having the amino acid sequence of Formula (I):

Pro-X_{n1}-(Cys/bXaa)-(Leu/Arg)-X_{n2}-Leu-Thr-(Gly/Ser)-X_{n3}-Pro (I) (SEQ ID NO: 63)

wherein "Cys/bXaa" indicates Cys or a basic amino acid; "(Leu/Arg)" indicates Leu or Arg; "(Gly/Ser)" indicates Gly or Ser; and X_{n1}, X_{n2}, and X_{n3} independently indicate arbitrary amino acid sequences not more than 10 residues in length, respectively;

(b) a polypeptide comprising an amino acid sequence ~~selected from the group consisting of~~ which differs from a polypeptide of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60 in which one amino acid has been substituted, deleted, inserted, ~~[[and/]]~~or added, ~~wherein~~ in such a way that the polypeptide suppresses neuronal death associated with Alzheimer's disease;

(c) a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60; and

(d) a fusion polypeptide comprising the polypeptide of (a) or (c) fused with one or more other polypeptides;

wherein the DNA ~~comprises a mutant~~ does not comprise the sequence of SEQ ID NO:4.

6. (Currently Amended) A vector into which a DNA encoding a polypeptide of any one of (a) to (c) is inserted:

(a) a polypeptide that suppresses neuronal death associated with Alzheimer's disease having the amino acid sequence of Formula (I):

Pro-X_{N1}-(Cys/bXaa)-(Leu/Arg)-X_{N2}-Leu-Thr-(Gly/Ser)-X_{N3}-Pro (I) (SEQ ID NO: 63)

wherein "Cys/bXaa" indicates Cys or a basic amino acid; "(Leu/Arg)" indicates Leu or Arg; "(Gly/Ser)" indicates Gly or Ser; and X_{N1}, X_{N2}, and X_{N3} independently indicate arbitrary amino acid sequences not more than 10 residues in length, respectively;

(b) a polypeptide comprising an amino acid sequence ~~selected from the group consisting of~~ which differs from a polypeptide of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60 ~~in which in such a way that~~ one amino acid has been substituted, deleted, inserted, ~~[[and/]]~~ or added, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease;

(c) a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60; and

(d) a fusion polypeptide comprising the polypeptide of (a) or (b) fused with one or more other polypeptides.

7. (Original) A host cell retaining the vector of claim 6.

8. (Previously presented) A method for producing the polypeptide of any one of claims 1 to 2 or a fusion polypeptide comprising the polypeptide of any one of claims 1 to 2, comprising:

culturing a host cell retaining a vector into which a DNA encoding the polypeptide of any one of claims 1 to 2, or a fusion polypeptide comprising the polypeptide of any one of claims 1 to 2 fused with one or more other polypeptides, is inserted; and

recovering an expressed polypeptide from the host cell or culture supernatant thereof.

9-12. (Canceled)

13. (Previously presented) A pharmaceutical composition comprising the polypeptide of any one of claims 1 to 2.

14-15. (Canceled)

16. (Currently Amended) The pharmaceutical composition of claim 13, comprising an amount of the polypeptide effective to ~~prevent or~~ treat Alzheimer's disease.

17-19 (Canceled)

20. (Currently Amended) The polypeptide of claim 1, wherein Xn_1 is an amino acid sequence consisting of 3 to 5 arbitrary amino acids, Xn_2 is an amino acid sequence consisting of 1 to 3 arbitrary amino acids, and Xn_3 is an amino acid sequence consisting of 3 to 5 arbitrary amino acids (~~SEQ ID NO: 100~~).

21. (Previously presented) The polypeptide of claim 1, wherein the polypeptide comprises an amino acid sequence of SEQ ID NO: 101.

22. (Previously presented) The polypeptide of claim 1, wherein the polypeptide comprises an amino acid sequence of SEQ ID NO: 102.

23-26 (Canceled)

27. (Previously presented) The polypeptide of claim 2, wherein the polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60.

28. (Currently Amended) The DNA of claim 5, wherein X_{n1} is an amino acid sequence consisting of 3 to 5 arbitrary amino acids, X_{n2} is an amino acid sequence consisting of 1 to 3 arbitrary amino acids, and X_{n3} is an amino acid sequence consisting of 3 to 5 arbitrary amino acids (~~SEQ ID NO: 100~~).

29. (Previously presented) The DNA of claim 5, wherein the DNA encodes a polypeptide comprising an amino acid sequence of SEQ ID NO: 101.

30. (Previously presented) The DNA of claim 5, wherein the DNA encodes a polypeptide comprising an amino acid sequence of SEQ ID NO: 102.

31-34 (Canceled)

35. (Previously presented) The DNA of claim 5, wherein the DNA encodes a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 6 to 8, 10, 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60.

36. (Currently Amended) The vector of claim 6, wherein X_{n1} is an amino acid sequence consisting of 3 to 5 arbitrary amino acids, X_{n2} is an amino acid sequence consisting of 1 to 3 arbitrary amino acids, and X_{n3} is an amino acid sequence consisting of 3 to 5 arbitrary amino acids (~~SEQ ID NO: 100~~).

37. (Previously presented) The vector of claim 6, wherein the DNA encodes a polypeptide comprising an amino acid sequence of SEQ ID NO: 101.

38. (Previously presented) The vector of claim 6, wherein the DNA encodes a polypeptide comprising an amino acid sequence of SEQ ID NO: 102.

39-42 (Cancelled)

43. (Previously presented) The vector of claim 6, wherein the DNA encodes a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60.

44. (Cancelled)

45 (Previously presented) A composition comprising a polypeptide of claim 2, and a carrier.

46. (New) The pharmaceutical composition of claim 13, comprising an amount of the polypeptide effective to treat a neurodegenerative disease associated with amyloid pathology, or a mutation of a protein selected from the group consisting of an amyloid precursor protein, presenilin-1 and presenilin-2.

47. (New) A pharmaceutical composition comprising a vector into which a DNA encoding the polypeptide of any one of claims 1 to 2 is inserted.

48. (New) The pharmaceutical composition of claim 47, wherein the composition is suitable to treat Alzheimer's disease.

49. (New) The pharmaceutical composition of claim 47, wherein the composition is suitable to treat a neurodegenerative disease associated with amyloid pathology, or a mutation of a protein selected from the group consisting of an amyloid precursor protein, presenilin-1 and presenilin-2.